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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/643,697

08/18/2003

Mark E. Thompson

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26646 7590 04/12/2007  
KENYON & KENYON LLP  
ONE BROADWAY  
NEW YORK, NY 10004

EXAMINER

COVINGTON, RAYMOND K

ART UNIT

PAPER NUMBER

1625

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/12/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/643,697

Applicant(s)

THOMPSON ET AL.

Examiner

Raymond Covington

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 9-12, 14 and 16-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 13 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7 are again rejected under 35 U.S.C. 112, first paragraph, because the specification, does not reasonably provide enablement for a <sup>using</sup>-X-Z-Y-<sub>1</sub> <sup>TCM</sup> substituent with X and Y being heteroatom, heteroatom-containing group or heterocycle, Z being a divalent.

Applicants' comments have been noted and considered but are not deemed persuasive of patentability.

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. In these claims, the numerous variables (e.g. X, Y, Z, J, R', R'', all known heteroatom, heteroatom-containing group, heterocycle etc.) and their voluminous complex meanings and their seemingly endless permutations and combinations are not adequately enabled.

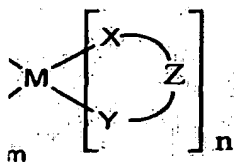
In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 ('Fed. Cir. 1988).  
There are many factors to be considered when determining whether there is sufficient

evidence to support a determination that a disclosure does not satisfy the enablement requirement

and whether any necessary experimentation is undue". These factors include

- 1) the breadth of the claims,
- 2) the nature of the invention,
- 3) the state of the prior art,
- 4) the level of one of ordinary skill,
- 5) the level of predictability in the art,
- 6) the amount of direction provided by the inventor,
- 7) the existence of working examples, and
- 8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The breadth of the claims with respect to the X-Z-Y- substituent alone



Includes all known heteroatom, heteroatom-containing group or heterocycle substituents.

The specification only has support for, e.g., pyrazoles, triazoles, tetrazoles, thiazoles, furans and pyridines.

The nature of the invention is a cyclometalated complex compound wherein the X-Z-Y- substituent, according to the specification page 18 paragraph 00053, can only be are heterocycles selected to have functionality appropriate for coordinating to M.

The level of skill and predictability in the art would require, for example, that every known heterocycle be tested in order to determine which heterocycles would have functionality appropriate for coordinating to M.

The direction provided by applicants only support pyrazoles, triazoles, tetrazoles, thiazoles, furans and pyridines heterocycle substituents.

There are no working examples for any others.

The unclear definition of the X-Z-Y- substituent requires an undue amount of experimentation to practice the invention. The general terms of having a heteroatom, heteroatom-containing group or heterocycle, divalent linker gives rise to numerous permutations and combinations of hetero groups.

There is insufficient disclosure of starting materials that would place such a diverse genus of compounds in possession of the public in the event of a patent grant. In addition, there is no reasonable assurance that such an alleged genus of compounds would possess all of the alleged properties for use. See *In re Fouche* 169 USPQ 429 ((CCPA 1971)). Quite clearly, more than routine experimentation would be required to place the claimed compounds, compositions and methods of use in possession of the public in the event of a patent grant. See *In re Armbruster*, 185 USPQ 152 (CCPA 1975).

Regarding applicants' comments it is noted that the specification only supports pyrazole X-Y-Z groups. See pages 21,22, 28, 29, 30, 32 and 27 which defines the "pz" in the table on page 32.

It is recognized that it is not required that every compound under the generic claims be exemplified. However, the generic description together with the four examples disclosed in applicants' specification would not place the organometallic compounds of formula (I) in possession by the skilled artisan in the field. There is no reasonable basis for assuming that the myriad of compounds embraced by the claims, including, e.g. 3 to 7 membered heterocyclic rings containing at least one heteroatom, will all share the same physiological properties since they are so structurally dissimilar as to be chemically non-equivalent.

The specification only provides some examples of what these terms may signify, but does not limit "heterocyclic" to any particular definition. For example, page 26 paragraph [00076] teach many examples of "heterocyclic groups," but this section specifically notes that the definition includes but is not limited to the examples set forth therein. So it is clear that applicants do not wish to be limited to only those named heterocycles. However, the specification does not provide enablement as to how to make the vast number of compounds encompassed by the scope of the recitation. On page 490 of the Concise Encyclopedia Chemistry, the

definition of "heterocycles" is cyclic hydrocarbon compounds in which the ring consists of carbon and at least one other element, usually, N, O or S. The definition goes on to explain that the possibilities for synthesis are nearly unlimited.

Claims 13 and 15 are objected to as depending from a rejected base claim but would be allowable if presented in independent form.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Covington whose telephone number is (571) 272-0681. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas McKenzie at telephone number (571) 272-0681.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->

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direct.uspto.gov. Should you have questions on access to the Private PAIR system,  
contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Thomas McKenzie".

Thomas McKenzie

SPE

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Handwritten initials "RKC" in black ink.

RKC